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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MIKHAIL R. LEVIT

Appeal 2009-006965
Application 10/826,530
Technology Center 1700

Decided: January 21, 2010

Before BRADLEY R. GARRIS, CHARLES F. WARREN, and
TERRY J. OWENS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

The Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-14. Claims 15-30, which are all of the other pending claims, stand withdrawn from consideration by the Examiner. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellant claims an aramid paper. Claim 1 is illustrative:

1. Aramid paper comprising 50 to 95 weight percent p-aramid pulp and 5-50 weight percent of floc with an initial modulus less than 3000 cN/tex.

The Reference

Ramachandran 5,833,807 Nov. 10, 1998

The Rejection

Claims 1-14 stand rejected under 35 U.S.C. § 103 over Ramachandran.¹

OPINION

We affirm the Examiner's rejection.

Issue

Has the Appellant shown reversible error in the Examiner's determination that Ramachandran would have rendered prima facie obvious, to one of ordinary skill in the art, a p-aramid pulp in combination with a floc having an initial modulus less than 3000 cN/tex?

Findings of Fact

Ramachandran discloses a wet-laid, dried aramid fiber sheet comprising at least one of aramid pulp and aramid floc (col. 4, ll. 3-6). The aramid pulp can be a p-aramid pulp (poly(p-phenylene terephthalamide), col. 4, ll. 38-39) and the aramid floc can be NOMEX (col. 4, ll. 21-24) which, the Appellant states, has an initial modulus of about 800 cN/tex

¹ Rejections of claims 1-14 under 35 U.S.C. §§ 102(b) or 103 over US 2002/0142689 to Levit and under 35 U.S.C. § 102(b) over Ramachandran are withdrawn in the Examiner's Answer (Ans. 4).

(Spec. 9:4-5). Ramachandran is silent as to the relative amounts of aramid pulp and aramid floc.

Analysis

The Appellant argues (Br. 6):

Ramachandran not only does not disclose or suggest any ratio of floc and pulp; it does not even disclose or suggest a combination of p-aramid pulp with floc having a modulus below 3000 cN/tex. Further, column 4, lines 3-10 of Ramachandran only speaks to the concentration of fiber as it relates to dispersion in view of the pH range (see column 3, lines 52-58).

Ramachandran's column 3, lines 52-58 are as follows:

The kernel of this invention resides in adjustment of the pH of the aramid fiber dispersion to greater than 10 to uniformly disperse the aramid fibers. For reasons not entirely understood, aramid fibers in water dispersion tend to agglomerate at pH's up to about 10 and tend to be repelled from each other and to become more completely and more uniformly dispersed at pH's of greater than 10.

That disclosure does not pertain to the relative amounts of aramid pulp and aramid floc which, Ramachandran discloses at column 4, lines 5-6, can be used together.

One of ordinary skill in the art, through no more than ordinary creativity and routine experimentation, would have optimized the relative amounts of aramid pulp and aramid floc for the uses of the aramid fiber sheet disclosed by Ramachandran, i.e., "as substrates for printed circuit boards, friction articles such as in clutch facing plates, thermal and electrical insulation, structural core and honeycomb material, and the like" (col. 4, ll. 11-14). *See KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (In making an obviousness determination one "can take account of the

inferences and creative steps that a person of ordinary skill in the art would employ”); *In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990); *In re Kulling*, 897 F.2d 1147, 1149 (Fed. Cir. 1990). Those uses are essentially the same as the Appellant’s disclosed uses of the Appellant’s aramid fiber sheet, i.e., “as a basic material for honeycomb cores, a reinforcement for printed circuit boards and other laminate structures, an electrical insulation in oil or resin-filled systems, as a basic material for friction facings in automotive industry, and in other applications of high performance composite structures” (Spec. 2:14-18). Consequently, it appears that one of ordinary skill in the art, when optimizing Ramachandran’s relative amounts of aramid pulp and aramid floc, would have arrived at amounts within the broad ranges arrived at by the Appellant and recited in the Appellant’s claims.

Conclusion of Law

The Appellant has not shown reversible error in the Examiner’s determination that Ramachandran would have rendered prima facie obvious, to one of ordinary skill in the art, a p-aramid pulp in combination with a floc having an initial modulus less than 3000 cN/tex.

DECISION/ORDER

The rejection of claims 1-14 under 35 U.S.C. § 103 over Ramachandran is affirmed.

It is ordered that the Examiner’s decision is affirmed.

Appeal 2009-006965
Application 10/826,530

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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